# **APPENDIX REPORT**

Project No.	SHT2109065201EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT21090652004	Model No.	AS10W
Start test date	2021-10-13	Finish date	2021-10-13
Temperature	<b>25.4</b> ℃	Humidity	38%
Test Engineer	Xiaoqin Li	Auditor	Xiaodong Zheo

Appendix clause	Test item	Result
А	Peak Output Power	PASS
В	Power Spectral Density	PASS
С	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

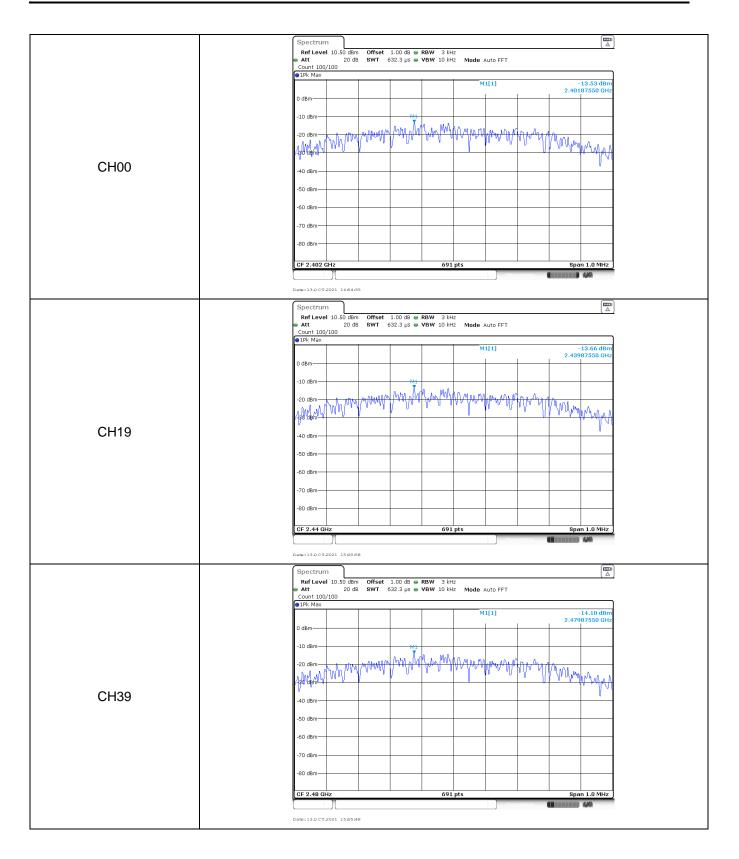
# Appendix A: Peak Output Power

Туре	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
	00	4.62	4.27		
BT-BLE	19	4.29	4.00	≤ 30.00	Pass
	39	3.98	3.64		

	Spectrum     Image: Construct of the sector o
	Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep Count 500/500
	PIPK View
	M1 M1[1] 4.62 dBm 2.40221710 GHz
	0 dBm
CH00	
	-20 dBm
	-30 dBm
	-40 dBm-
	-50 dBm
	-60 dBm
	-70 dBm
	-80 dBm
	CF 2.402 GHz 691 pts Span 5.0 MHz
	Date: 13.0 CT 2021 14.55:12
	Spectrum RefLevel 10.50 dBm Offset 1.00 dB ● RBW 2 MHz
	Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep Count 500/500
	Pipk View
	0 dBm
	-10 dBm-
	-20 dBm-
	-30 dBm
CH19	
0.110	-40 dBm-
	-50 dBm-
	-60 dBm
	-70 dBm
	-80 d8m
	CF 2.44 GHz 691 pts Span 5.0 MHz
	Messuring (11111 🖬 🎶
	Dam:13.0CT2021 15.00.21
	Spectrum
	Ref Level 10.50 dBm Offset 1.00 dB RBW 2 MHz Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep
	Count 500/500
	M1 M1[1] 3.98 dBm V 2.48023150 GHz
	0 dBm
	-10 dBm
	-20 dBm
	-30 dBm-
CH39	-40 dBm-
	-50 dBm
	-60 dBm
	-70 dBm-
	-80 dBm
	CF 2.48 GHz 691 pts Span 5.0 MHz

### Appendix B: Power Spectral Density

Туре	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
	00	-13.53		
BT-BLE	19	-13.66	≤8.00	Pass
	39	-14.10		



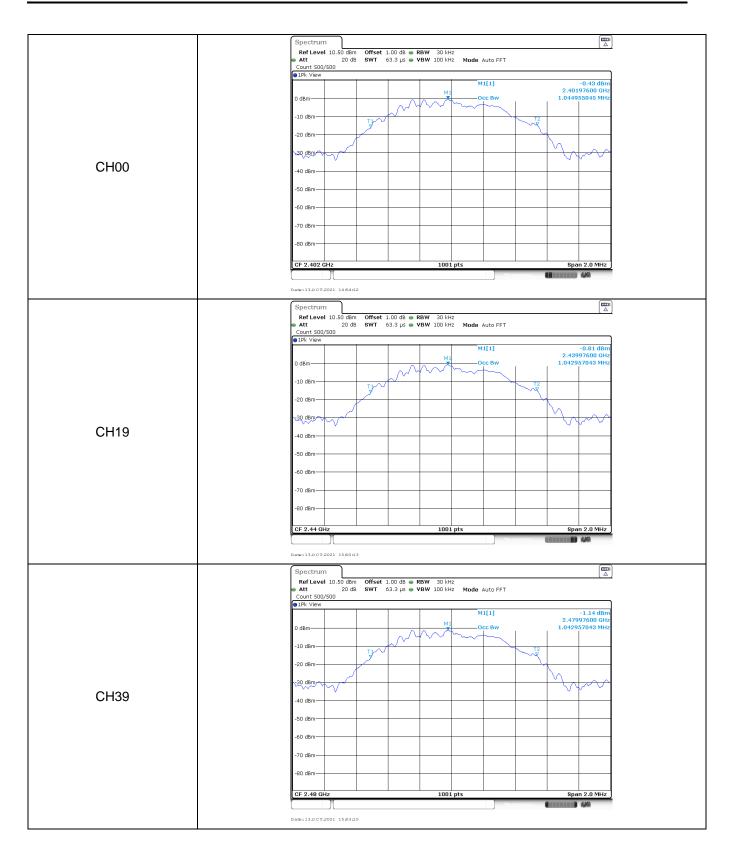
### Appendix C: 6dB bandwidth

Туре	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
	00	724.00		
BT-BLE	19	724.00	≥500	Pass
	39	724.00		

	Spectrum         (mm)           Ref Level 10.50 dBm         Offset 1.00 dB ● RBW 100 kHz						
	🥃 Att 20 dB SWT 19.1 μs 🥃 VBW 300 kHz Mode Auto FFT						
CH00	Count 500/500  Place A count Source						
	M1[1] -2.35 dBm						
	0 dBm 01 -2.317 dBm M2[1] 03 2.40164000 GHz 3.66 dBm						
	-10 dBm						
	-20 dBm						
	-30 dBm-						
	-40 dBm						
	-50 dBm						
	-60 dBm						
	-70 dBm						
	-80 dBm-						
	CF 2.402 CH2 1001 pts Span 2.0 MHz						
	Marker           Type         Ref         Trc         X-value         Y-value         Function         Function Result						
	M1         1         2.40164 GHz         -2.35 dBm           M2         1         2.402008 GHz         3.68 dBm						
	mic         i         2.7/2000 offic         3.000 dolin           DB         M1         1         7/24.0 KHz         0.000 dB						
	Measuring (Catheren )						
	Data:13.0CT.2021 14.54.04						
	Spectrum         []           Ref Level 10.50 dBm         Offset 1.00 dB ● RBW 100 kHz						
	👄 Att 20 dB SWT 19.1 μs 👄 VBW 300 kHz Mode Auto FFT						
	Count 500/500  P 1Pk View						
	M12.69 dBm 2.43964000 GHz						
	U dbm 01 -2.674 dbm M2[1] 3.33 dBm						
	-10 dBm						
	-20 dBm						
	-30 dBm						
	-40 dBm						
01140							
CH19	-50 dBm						
	-60 dBm						
	-70 dBm						
	-80 d8m						
	CF 2.44 GHz 1001 pts Span 2.0 MHz						
	Marker						
	Type         Ref         Trc         X-value         Y-value         Function         Function Result           M1         1         2.43964 GHz         -2.69 dBm         -         -         -						
	M2         1         2.440008 GHz         3.33 d8m           D3         M1         1         724.0 kHz         -0.02 d8						
	Date: 13 DCT 2021 15:00:05						
	RefLevel 10.50 dBm Offset 1.00 dB 👄 RBW 100 kHz						
	Count 500/500						
	Count 500/500 ●1Pk View 142 M1[1] -2.99 dBm						
	Count 500/500 PIPk View 0 dBm 0 1 - 2 092 dBm 0 dBm 0 1 - 2 092 dBm - 2.99 dBm - 2.99 dBm - 2.99 dBm - 3.92 dBm - 3.92 dBm						
	Count 500/500 ●1Pk View 142 M1[1] -2.99 dBm						
	Count 500/500						
	Count 500/500 P IPk View 0 dBm D1 -2,982 dBm -10 dBm -20						
	Count 500/500 PIk View      O dBm      D1 -2.982 dBm      View      M1      M1      M2      M1      M2      M1      Current						
	Count 500/500 PIPk View 0 dBm D1 -2.982 dBm -10 dBm -30 dBm -40 dBm -40 dBm -10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -30 dBm -40						
СН39	Count 500/500 PIk View      O dBm      D1 -2.982 dBm      View      M1      M1      M2      M1      M2      M1      Current						
CH39	Count 500/500 PIK View						
CH39	Count S00/S00                • IPk View               • 1/2               M1[1]             • 2.99 dBm                 0 dBm             • 01 -2.982 dBm             • 10             • 10						
CH39	Count: Sou/Soo                • IPk View               • M2               • M1[1]             • 2.99 dBm               • 2.499 dBm             • 3.02 dBm             • 3.02 dBm             • 3.02 dBm             • 4000800 GHz             • 4000800 GHz             • 40 dBm						
CH39	Count: 500/500          • IPk View        0 dBm     M1       0 dBm     M1       -2.99 dBm       -3.0 2 dBm       -10 dBm       -20 dBm       -30 dBm       -30 dBm       -50 dBm       -70 dBm       -70 dBm						
СНЗ9	Count: Sou/Sou                • IPk View               • IP View               • 2.99 dBm               • 2.499 dBm             • 3.02 dBm             • 3.02 dBm             • 3.02 dBm             • 4000800 GHz             • 4000800 GHz             • 4000800 GHz             • 400 dBm             • 400 dBm            • 400 dBm            • 400 dBm						
CH39	Count: 500/500          ● IPk View        0 dBm     01 -2.992 dBm       -10 dBm     -2.499 dBm       -20 dBm     -2.48000800 GHz       -30 dBm     -2.48000800 GHz       -40 dBm     -2.48000800 GHz       -50 dBm     -2.90 dBm       -60 dBm     -2.70 dBm       -70 dBm     -2.90 dBm       -70 dBm     -2.0 MHz       Type   Ref   Trc   X-value   Y-value   Function   Function Result   100						
CH39	Count: Sou/Sou                PIPk View               Pland               2.47964 000 GHz               2.47964 000 GHz                 0 dBm               01 -2.992 dBm               3.0.2 dBm               3.0.2 dBm                 10 dBm               1.2 dBm               2.48000800 GHz               3.0.2 dBm                 -20 dBm               4.0 dBm               2.48000800 GHz               2.48000800 GHz                 -30 dBm               4.0 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -40 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -50 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -70 dBm               4.0 dBm               4.0 dBm               5.0 dBm                 -80 dBm               4.0 dBm               5.0 dBm               5.0 dBm                 -10						
CH39	Court S00/S00         Image: Display the second se						
CH39	Count: Sou/Sou                PIPk View               Pland               2.47964 000 GHz               2.47964 000 GHz                 0 dBm               01 -2.992 dBm               3.0.2 dBm               3.0.2 dBm                 10 dBm               1.2 dBm               2.48000800 GHz               3.0.2 dBm                 -20 dBm               4.0 dBm               2.48000800 GHz               2.48000800 GHz                 -30 dBm               4.0 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -40 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -50 dBm               4.0 dBm               4.0 dBm               4.0 dBm                 -70 dBm               4.0 dBm               4.0 dBm               5.0 dBm                 -80 dBm               4.0 dBm               5.0 dBm               5.0 dBm                 -10						

### Appendix D: 99% Occupied Bandwidth

Туре	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
	00	1.05		
BT-BLE	19	1.04	-	Pass
	39	1.04		

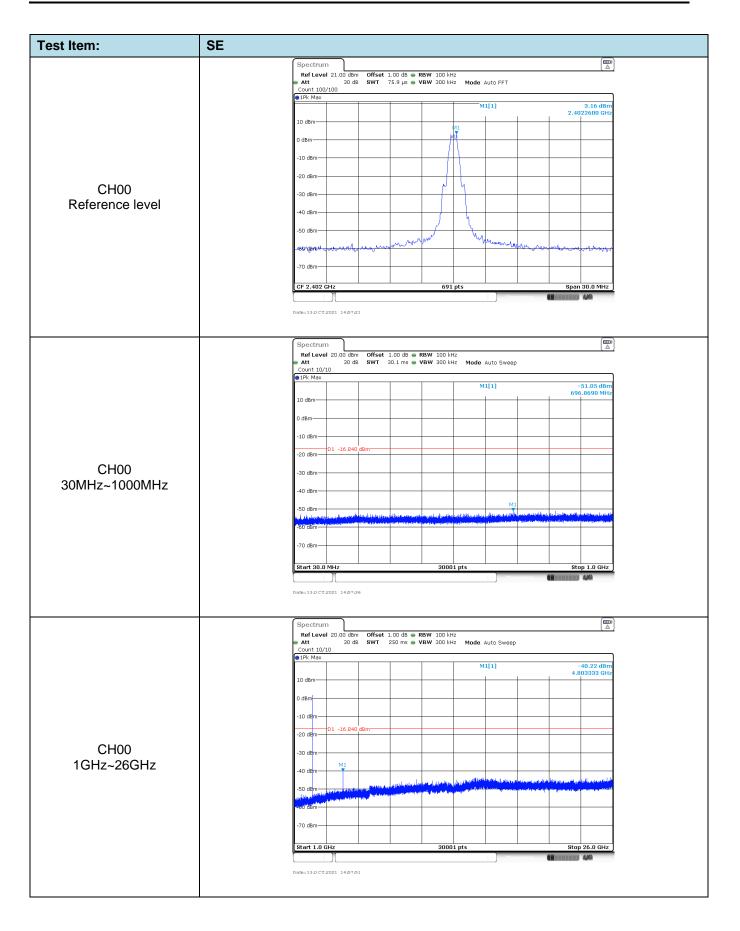


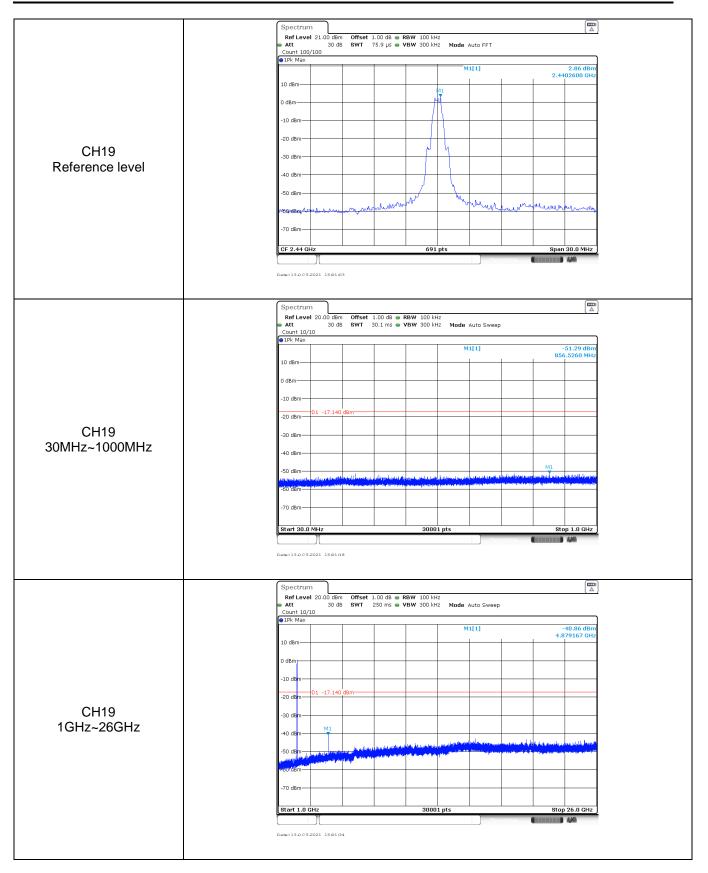
# Appendix E: Duty cycle

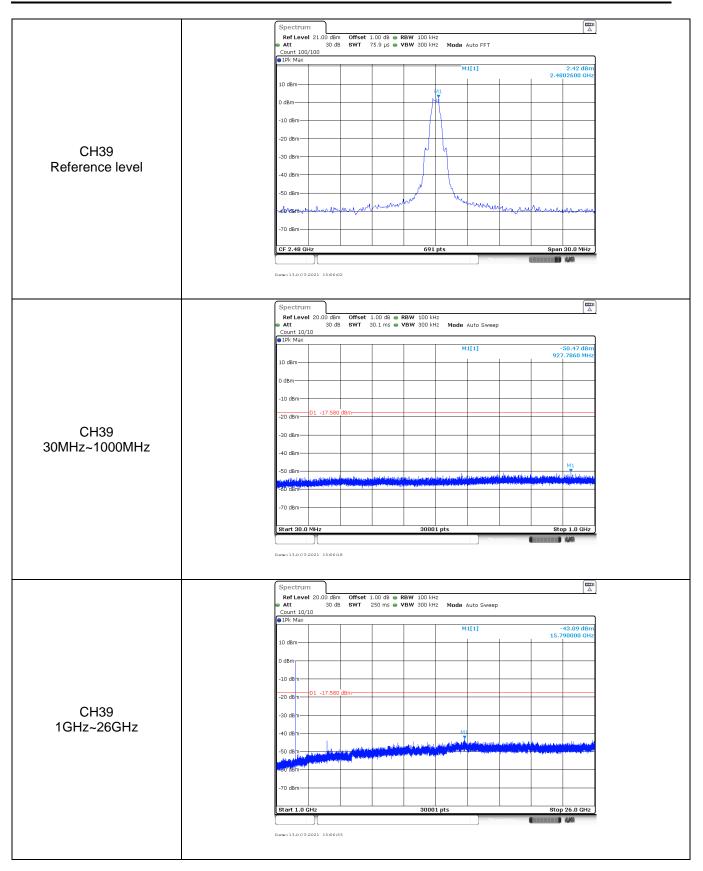
Test Frequency (MHz)	T <sub>on time</sub> for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on time</sub> (kHz)
2440	0.38	0.62	61.3%	2.6
	Spectrum           Ref Level 30.           Att           SGL TRS:VID           IPk Clw           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -20 dBm           -30 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -60 dBm           -60 dBm           -10 dBm           -20 dBm           -30 dBm           -30 dBm           -10 dBm           -20 dBm           -30 dBm           -10 dBm           -20 dBm           -20 dBm           -20 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -70 dBm	40 db • SWT 10 ms • VBW 1 MHz	2.5 ns 1.66 db 375.05 µs	

st Item:	Band edge									
		Spectrur Ref Leve	el 10.50			RBW 100 kHz				
		● Att Count 300 ●1Pk Max		Odb SWT	1.1 ms 🖷	VBW 300 kHz	Mode Auto Swe	ep		1.70 ølg m
		0 dBm					M2[1]			402040 GHz -53.51 dBm 400000 GHz
			D1 -18	300 dBm						
		-40 dBm-								MR
CH00		4=60 dBm	nowen	manum	marchine	umuntur	un un and and the	mputur	MR	and the second
		-80 dBm								
	1	Start 2.31 Marker	GHz			691 pt	s		Stop	2.405 GHz
		Type Re M1	1		04 GHz	Y-value 1.70 dBm	Function	Fun	iction Resul	t
		M2 M3 M4 M5	1 1 1 1	2	2.4 GHz .39 GHz .31 GHz '68 GHz	-53.51 dBm -63.90 dBm -64.45 dBm -54.95 dBm				
		Date:13.0CT Spectrur		54:44				leasuring		
		Ref Leve Att Count 100 Pk Max	2		1.00 dB 👄 56.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto FFT			
	1	M					M1[1]			3.04 dBm
							M2[1]			800220 GHz -56.96 dBm 835000 GHz
		-10 dBm-	D1 -16	960 dBm					-	
		-30 dBm— -40/dBm—								
CH39		-60 dBm-		Mar Mart	mm					
		-70 dBm-				herelinen	murrown	man	mm	man
		-80 dBm Start 2.47	78 GHz			691 pt	s		St	op 2.5 GHz
		Marker Type Re		X-valu 2.480		Y-value 3.04 dBm	Function	Fun	iction Resul	t
		Marker	ef Trc 1 1 1	2.480	e 022 GHz 035 GHz 025	Y-value 3.04 dBm -56.96 dBm -68.63 dBm -56.77 dBm		Fun	iction Resul	t

# Appendix F: Band edge and Spurious Emissions (conducted)







-----End of Report------